

## CHAPTER TWELVE

### PHENOMENALISM

The trend in recent epistemology away from what I shall call classical phenomenalism ('physical objects are patterns of actual and possible sense contents') has become almost a stampede. Once again, as so often in the history of philosophy, there is a danger that a position will be abandoned before the reasons for its inadequacy are fully understood, with the twin results that: (a) it will not be noticed that its successor, to all appearances a direct contrary, shares some of its mistakes; (b) the truths contained in the old position will be cast aside with its errors. The almost inevitable result of these stampedes has been the 'swing of the pendulum' character of philosophical thought; the partial truth of the old position reasserts itself in the long run and brings the rest of the tangle with it.

I believe that this is exactly what is happening with respect to the phenomenalist account of physical objects. On the other hand, I also believe that the tools are at hand for a decisive clarification of traditional puzzles about perceptual knowledge, and that the pendulum can be brought to a stop. This chapter is an attempt to do just that by submitting phenomenalism to a thorough review in the light of recent achievements in the logic of conceptual frameworks. I hope to isolate the important insights contained in recent phenomenalism, so that they can remain as abiding philosophical achievements no longer periodically obscured by the confusions with which they have been associated.

In the early stages of the argument, devoted to an initial survey of the ground, I shall be distinguishing a number of 'phenomenalisms' all of which are variations on a common theme. This theme is the idea that the physical objects and processes of the 'common sense' world (i.e.

physical objects as contrasted with ‘scientific objects’ such as electrons and electro-magnetic fields) actually do have the kinds of quality they seem to have. Some physical objects *are* red, even though other physical objects, viewed in abnormal circumstances, merely seem to be red. Notice that this common theme is an ontological one. It says nothing about the ‘direct’ or ‘indirect’, ‘inferential’ or ‘non-inferential’, character of perceptual experience. On the other hand, the reasons which philosophers have offered to support one or other variation on this ontological theme (or which have led them to reject it *in toto*) have stemmed largely from perceptual epistemology, meaning theory, and reflection on the bearing of the sciences, in particular physics and psychology, on the problem of what there *really* is.

The simplest form of phenomenalism would be that ‘naive’ realism which holds that while the verb ‘to see’ has many uses—including perhaps, that in which Macbeth ‘saw’ a dagger which was not there—its primary use is one in which a person is said to see a physical object and to see that it is of a certain colour, e.g. green, where this implies that the physical object in question exists and that it is in fact green. According to ‘naive’ realism, seeing that a leaf is green is a special case of knowing that a leaf is green. Indeed, it is a special case of direct, i.e. non-inferential, knowing. One *can* infer from the fact that the leaf looks black when one is viewing it in a red light that the leaf is green. To do so, however, is not to *see* that the leaf is green. Nor does seeing that the leaf is green consist in inferring that it is green from the fact, say, that it looks green and one knows oneself to be viewing it in daylight. This is not to say that such an inference cannot occur, but simply that it is not an analysis of seeing that the leaf is green.

‘Naive’ realism, thus understood, is not committed to the paradoxical view that ‘O appears red to S’ has the force of ‘S knows (sees) that O is red’—thus implying that things are everything they seem to be—though the label ‘naive realism’ has often been used in this sense.

To avoid confusion—and the paradox of calling anything as sophisticated as an ably defended philosophical position ‘naive’—I will use the phrase ‘direct realism’ instead. According to direct realism, then, seeing that a leaf is green is not a matter of seeing that it looks green and inferring from this, together with the character of the circumstances of perception, that it is green. Nor, the direct realist goes on to say, is seeing that the leaf is green a matter of (directly) seeing that a certain item, not a physical object, is green and inferring (or taking for granted) that the item ‘belongs to’ a green leaf. My immediate purpose, however, is not to explore the merits of direct realism— though I shall be doing so shortly. For before this increasingly popular view can be evaluated, we must turn to the announced task of examining classical phenomenalism.

Direct realism and classical phenomenalism share what I have referred to as the ‘phenomenalistic theme’. For both are inclined to say that physical objects and processes actually do have the various sorts of quality which they can also merely seem to have. The extent of this agreement, however, must not be exaggerated, since, of course, they give quite different accounts of what it is for a physical object or process to have (or, for that matter, to seem to have) a certain quality, e.g. red. The point is a familiar one. Direct realism takes as the basic grammar of colour predicates,

O is (was, will be) red at place p

e.g. ‘This apple is red on the surface (but white inside)’. It faces the problems of explaining statements of the form ‘O looks (looked, will look) red at place p to S’ in terms of this ‘basic’ statement form. Classical phenomenalism, on the other hand, introduces in one way or another a set of entities, not themselves physical objects, which are more ‘basic’ than physical objects and characterized by colour in a sense more basic than that in which physical objects are coloured.<sup>1</sup> Let us call these entities, following Ayer, ‘sense contents’. We can then say that according to the

classical phenomenalist the fact that a physical object is red in the appropriate sense of ‘red’— $red_p$ —is constituted by the fact that the actual sense contents which would ‘belong’ to it if it were viewed in standard conditions are red in the appropriate sense of ‘red’— $red_s$ . On the other hand, the object merely looks  $red_p$  to S if the  $red_s$  sense contents which S is directly seeing occur under relevantly abnormal circumstances of perception.

Another way of looking at the difference between the two positions is to note that according to classical phenomenalism, whenever an object *looks*  $\phi_p$  to someone, whether or not it is  $\phi_p$ , a  $\phi_s$  sense content exists; also that all sense contents the direct seeing of which is ingredient in the seeing of a physical object whether as it is (say,  $red_p$ ) or as it merely seems to be (say,  $black_p$ ) are constituents of the object. Thus a  $black_s$  sense content can be a constituent of an object which is  $red_p$  through and through and through (e.g. a piece of sealing wax). By contrast, the direct realist typically holds that the only entities characterized by colour which are involved in the perception of physical objects are the physical objects themselves and their *publicly observable* parts and that only those colours belong to a physical object or one of its parts which it would be seen to have by a standard observer in standard conditions. He may be prepared to say, as we shall see, that for a physical object to *be* red is for its ‘surface’ to *be* red in a more basic sense (not, of course,  $red_s$ ), and that for a physical object to *look* red is for its ‘surface’ to *look* red. But, as is well known, he rejects the inference from ‘x looks  $\phi$ ’ to ‘(Ex) x is  $\phi$ ’ with its correlative distinction between ‘ $\phi_p$ ’ and ‘ $\phi_s$ ’.

I pointed out above that according to the direct realist (*dit* ‘naive’) the basic grammar of colour predicates is illustrated by

This apple is red on the surface, but white inside.

We can, indeed, say ‘the surface of the apple is red’; but if by ‘surface’ is meant, e.g. the skin, we would merely have another statement about the colour of a physical object. Perhaps we wish to say that the skin itself is red ‘on the surface’ (and pinkish underneath). Well and good; we can still handle this in terms of the proposed basic grammar. We can even introduce in terms of this form the idea that however thin a ‘skin’ we take, that ‘skin’ would be red. We must, however, beware of making the move (which has often been made) from

This apple is red at the surface because it has a skin which is red

to

This apple (or skin) is red at the surface because it has a ‘surface’ which is red

where the quoted ‘surface’ no longer means a physical object (e.g. a skin) nor sums up a reference to ‘no matter how thin a paring were taken’ but introduces an entity of a new category, a particular without thickness. If one makes this move, he is committing himself to the idea that

O is red at the surface

entails

O has x and x is red

where x is a ‘surface’ or ‘expanse’, and while this is an ontological thesis, it is difficult, in view of the fact that we do not see inside things (most things, that is), to avoid concluding that ‘seeing’ an apple consists in *seeing* the ‘surface’ of the apple and ‘believing in’ the rest.

Notice that the ‘colour surfaces’ of the philosopher who makes the above move from an initial position of direct realism are not yet the counterparts of the sense contents of the classical

phenomenalist. For these ‘surfaces’, like the physical objects to which they belong, are *public* entities which presumably can *look* other than they *are*. In other words, a direct realist could reasonably be expected to apply to them the distinction between *being* of a certain colour and *seeming to be* of that colour which was originally drawn in connection with physical objects, and to do the same with the numberless colour surfaces which would be exposed by slicing the apple in all possible ways. The direct realist who has embarked on this path might use some such formula as ‘the object consists of actual and potential colour “surfaces”’—which has a verbal similarity to the thesis of classical phenomenalism. Yet there would remain one essential difference. The direct realist would insist that each ‘surface’ is a public object which can look other than it is. Thus, a certain exposed ‘surface’ could be red and yet, because of differing circumstances of perception, look red to S, black to S’, and purple to S”. For classical phenomenalism, on the other hand, there would be as many actual sense contents as there were experiences of the exposed surface: a red one sensed by S, a black one sensed by S’, and a purple one sensed by S”.

It is worth pausing to note that the direct realist can scarcely hold that the remainder of the apple, over and above its exposed ‘surface’, consists of actual ‘surfaces’ waiting, so to speak, to be disclosed. After all, the apple can be sliced in many ways, and the resulting ‘surfaces’ have claim to be ‘the’ constituents of the apple. Surely the only plausible forms of the view that physical objects *qua* coloured ‘consist of actual colour through and through’ are those which either think of objects *qua* coloured as ‘colour solids’ and of ‘surfaces’ as dependent coloured particulars which have a merely potential existence until the object is ‘sliced’, or conceive of colour points as basic realities, physical objects *qua* coloured being 3-dimensional and ‘colour surfaces’ being 2-dimensional sets of colour points. Of these two views the second alone would

be fully consistent with the idea that ‘O is red at the surface’ is analysable into ‘O has a “surface” which is red’, for one who thinks of colour solids as the basic mode of being of colour is unlikely to make the mistake of thinking of the surfaces of such solids as basic particulars. The idea, however, that our common sense conception of physical objects is analysable into that of a 3-dimensional (solid) continuum of colour points is a dubious one, to say the least. While if ‘surfaces’ are highly derived abstractions pertaining to the solids of which they are the ‘surfaces’, then so far from ‘O is red at the surface’ being explained in terms of ‘O has a “surface” which is red’ the converse would have to be true.

Not only is his move an ill-considered one, the direct realist who analyses the red apple into a red ‘surface’ the seeing of which involves no supplementation by ‘belief’, and a ‘core’ which is ‘believed in’, has stepped on the slippery slope which leads to classical phenomenalism. For if the ‘surface’ is one particular related to others, there is no contradiction in supposing it to exist without the others. Why, then, should not there be *unattached* colour ‘surfaces’? And if the object of *pure-seeing* (seeing which contains no ‘supplementing belief’) is always ‘surfaces’, what *inductive* reason could there be for supposing that there are ‘cores’ to which they belong? Is it, perhaps, a synthetic *a priori* truth that every ‘surface’ covers a ‘core’? At this point the existence of hallucinations and double vision is likely to suggest that it isn’t even true.

Here we must be careful. The direct realist who eschews ‘surfaces’ will simply say that there seemed to Macbeth to be a dagger in front of him or that it seems to Jones that there are two candles on the table. But one who is sliding down the slippery slope will be tempted to say that although there *merely seemed* to Macbeth to be a *dagger*, there *really was* a dagger-shaped ‘surface’ which Macbeth was pure-seeing, and that although it merely seems to Jones as if there were two candles on the table, there really are two curved white ‘surfaces’ which Jones is pure-

seeing. He *need* not, of course, make this move. It is open to him to say that there merely seemed to Macbeth to be a dagger-shaped 'surface'; that there merely seem to Jones to be two curved white 'surfaces'. These would be the 'existential seeming' counterparts of the 'qualitative seeming' he has already extended to his 'surfaces'. He could, in other words, stop his drift in the direction of classical phenomenism by keeping his 'surfaces' what they were to begin with, namely *publicly observable closed* 'surfaces' only part of which can be seen at one time (without the use of mirrors) and which always contain a 'core' though one may be mistaken as to just what kind of 'core' it is. Where there is no 'core', he will insist, there merely seems to be a 'surface'. 'Surfaces' as originally introduced include *back* 'surfaces' as well as *front* or *facing* 'surfaces'. To limit 'surfaces' to facing 'surfaces' is to take a decisive step in the direction of equating 'surface' with 'seen colour surface', preparing the way for the identification of 'surfaces' with the sense contents of classical phenomenism.

Perhaps the most important single outcome of the above discussion is the recognition that there are *two* radically different trains of thought which might lead one to distinguish between a 'basic' and a 'derivative' sense of 'seeing x', and, correspondingly, of 'seeing that x is  $\phi$ '. One of them is rooted in a distinction between physical objects and their public 'surfaces'. It is, in essence, a misinterpretation of the fact that we can see a book without seeing its back cover or its insides, and amounts to a distinction between what we see without supplementation by belief or taking for granted (i.e. a public 'surface') and what we see in a sense (*see*<sub>2</sub>) which consists of seeing in the former (*see*<sub>1</sub>) a 'surface' and believing or taking it to belong to a physical object of a certain kind. It is worth insisting once again that this reification of surfaces into objects of perception is a mistake. It is simply not the case that we *see* 'surfaces' and *believe in* physical objects. Rather, what we see is the physical object, and if there is a sense in which 'strictly



speaking' what we see *of* the physical object is that it is red on the facing part of its surface and rectangular on the facing side, nevertheless the physical object as having *some* colour all around (and all through) and *some* shape on the other side is the object seen, and not an entity called a 'surface'. This mistake, however, has been endemic in modern perception theory, and has led to a distinction between two senses of 'see' each with an appropriate kind of object, the 'see<sub>1</sub>' and 'see<sub>2</sub>' characterized above. Notice that according to the above train of thought, items which are seen (public 'surfaces') as well as items which are seen<sub>2</sub> (physical objects) can seem to be other than they are.

On the second train of thought, what is basically-seen (seen<sub>1</sub>) is a sense content, sense contents being *private* and at least as numerous as the facts of the form 'there seems to S to be a physical object in a certain place', with which they are supposed to have an intimate, but variously construed, connection. Here, also, seeing<sub>2</sub> a physical object is explicated in terms of seeing<sub>1</sub> an item—in this case a sense content—and 'believing' or 'taking' it to 'belong' in an appropriate sense to a physical object. If one confuses between these two ways of distinguishing (correctly or not) between a 'basic' and a 'derivative' sense of 'see', melting them into a single contrast between what is *directly* seen and what is *seen but not directly seen*, one is bound to be puzzled (as was, for example, Moore) as to whether or not what is directly seen can be the surface of a physical object, and as to whether or not what is directly seen can look other than it is.

Before embarking on the next stage of my argument, let me pause to emphasize that I do not intend to deny that when Macbeth saw (i.e. seemed to see, thought he saw) a dagger, there existed as an element in his visual experience something that might well be called a dagger-shaped colour expanse. Indeed, I think, (and shall argue) that *all things considered* it is as certain

as anything can be that there was. The point I wish to stress, however, is that unless one locates correctly the idea that there are such ‘expanses’, one runs the risk of other mislocations and confusions, the net result being to lessen seriously the chances of getting out of the morass of traditional perception theory.

## II. Sense Contents

My exploration of classical phenomenalism will be built around a study of the key terms in the slogan ‘physical objects are patterns of actual and possible sense contents’. I shall begin by examining the ways in which philosophers have used the expression ‘sense content’ and related technical terms. I think that three major traditions can be distinguished which differ radically in spite of verbal similarities in their formulations. I shall begin by considering the approach which is in many respects the simplest of the three, a virtue which springs from its use of a thoroughly familiar model for its technical language. This model is ordinary perception talk. Such perception-theoretical expressions as ‘directly see’, ‘directly hear’, etc., are given a logic which parallels, in significant respects, the logic of the verbs ‘to see’, ‘to hear’, etc., as they occur in everyday perceptual discourse. Thus, to such statements as

Jones *saw* a book and *saw that* it was blue

there correspond such statements as

Jones *directly saw* a bulgy red expanse and *directly saw that* it was bulgy and red.

And just as *seeing that* is a specific form of *knowing that*, a variety of observational knowledge, of *observing* or *perceiving that*, so *directly seeing that* is construed as a variety of *directly observing* or *perceiving that*, and, hence, as a specific form of *directly knowing that*. Again, just

as *seeing x* is a form of *perceiving x*, so *directly seeing x* is introduced as a specific form of *directly perceiving x*, or, as the term is introduced, *sensing x*.

The fact that ‘sensing x’ is introduced on the model of ‘perceiving x’ as ordinarily used brings with it a number of implicit commitments not all of which can be dodged without cutting the theory off from the roots of its meaning. One such commitment rests on the fact that in ordinary perceptual discourse the consequence from

Jones saw a book

to

There was a book (i.e. the one that Jones saw)

is valid. The theory, thus introduced, brings with it, therefore, a commitment to the consequence from

Jones sensed a red and triangular expanse

to

There was a red and triangular expanse (i.e. the one that Jones sensed).

Another commitment rests on the fact that in ordinary perceptual discourse the objects of perception typically exist before they are noticed and after we have turned away; in short they can and do exist unperceived. The theory, introduced on this model, brings with it the implication that the red and triangular item which Jones sensed is capable of existing unsensed. Other implications are that items which are sensed can appear to be other than they are, and that the fact that a sensed item is red and triangular can no more depend on the fact that someone

*senses that* it is red and triangular, than the fact that a table is round and brown depends on the fact that someone *perceives that* it is round and brown.

But before further exploration of this first approach, it will be useful to describe the second approach, which has a quite different background and orientation. It is a sophisticated approach, and if the influence of ordinary perception talk is clearly there, it is often curiously indirect, mediated by the influence of a certain interpretation of conceptual thinking. Indeed, it would not be amiss to say that the fundamental model of this second approach is the framework of categories traditionally used to explain the status of the objects of thought. But the point of saying this will emerge as the view itself is described.

According to this second approach, then, the *esse* of the red and triangular item of which one has an ‘idea’ or ‘impression’ on a particular occasion is *percipi*. By this is meant, fundamentally, that the inference from

S has a sensation of a red and triangular expanse

to

There exists a red and triangular expanse

is illegitimate. Why it should be construed as invalid will be taken up shortly. For the moment it will be useful to set down beside it as a supposed parallel the invalidity of the inference from

S has an idea of (i.e. is thinking of) a golden mountain

to

There exists a golden mountain.

Notice that the thesis we are considering is to the effect that the *esse* of the red and triangular expanse of which one is having a sensation, *qua being that of which one is having a sensation*, is *percipi*. This must not be confused with the claim that the *esse* of colour expanses *in general and without qualification* is *percipi*. It is perfectly possible to claim that the *esse* of a triangular expanse of which one is having a sensation is *percipi*, while insisting that there are triangular expanses the *esse* of which is not *percipi*. Thus, Locke would surely have agreed with Berkeley that the *esse* of the (red) triangular expanse of which, on a particular occasion, he is having a perception is *percipi*, while denying that the *esse* of all triangular expanses is *percipi*. And a Locke who avoided bifurcating nature would say the same of *red* triangular expanses as well.

In this second framework, the general claim that the *esse* of all colour expanses is *percipi* might be formulated—somewhat anachronistically—as the claim that expressions such as ‘a red triangle’<sup>2</sup>—in the sense in which they refer to what is ‘immediately’ or ‘directly’ perceived—can properly occur only in the context

S has a sensation of ...

thus, ‘S has a sensation of a red triangle’, or, as we shall see, in derivative contexts which are introduced in terms of it. This is a stronger thesis than the above, according to which ‘S has a sensation of a red triangle’ does not entail ‘There exists a red triangle’. For, with a qualification to be developed in a moment, it insists that the latter statement is ill-formed.

In the material mode of speech, this more radical thesis might be put by saying that there are no red triangles, only sensations of red triangles. It is easy to see, however, that if one were to introduce the term ‘sense content’ in such a way that

There exists a red and triangular sense content

had the force of

Someone is having the sensation of a red triangle

then, of course, one could say

There are red and triangular *sense contents*

as well as

There are sensations of red triangles.

But, then, these would be simply two ways of saying the same thing, and the inference from

S is having a sensation of a red triangle

to

There exists a red and triangular sense content

would be analytic.

We are now in a position to see that whereas a philosopher who takes the *first* approach might claim that red triangles cannot exist unsensed, and put this by saying that their *esse* is *percipi*, he would (in addition to doing violence to his model) be making a quite different claim from the above. He would, indeed, be claiming that

(Ex) x is a red triangle

entails

(ES) S senses x

and this claim would be a puzzling one, for it is difficult to see why the existence of an item (a red triangle) should entail a relational fact about it which is not included in its definition. The entailment would have to be *synthetic*, and either *a priori* or *inductive*, and both alternatives are not without their difficulties. However this may be, the point I wish to stress for the moment is that on the *second* approach, the idea that the *esse* of colour expanses is *percipi* is not the claim that ‘x is red’ entails ‘(ES) S has a sensation of x’. Rather it is the claim that ‘x is red’—unless it has the sense of ‘x is a red *sense content*’—is ill-formed. And however paradoxical it may seem to say that ‘red triangle’ does not properly occur apart from the context ‘sensation of (a red triangle)’ it must be remembered that the second approach does not have as its model our ordinary perception talk. For it would indeed be paradoxical to make the parallel claim with respect to ‘green tree’ and the context ‘perception of (a green tree)’ as ordinarily used.

Another significant difference between the second and first approaches concerns the fact that whereas on the first approach *sensing x* has a close logical connection with *sensing that-p*—a connection which parallels the connection in its model between statements of the form ‘S saw x’ (e.g. ‘Jones saw the table’) and statements of the form ‘S saw that-p’ (e.g. ‘Jones saw that the table was brown’)—the *second* approach does not even contain the form

S has a sensation *that* ...

This difference accounts for the fact that proponents of the *first* approach characteristically speak of sensing as a form of *knowing*, whereas those who take the *second* line characteristically deny that having a sensation is a form of knowing. They grant, of course, that one may know that he is

having a sensation of a red triangle. But this knowing is supervenient to the sensation, whereas on the *first* approach

S senses that x is red and triangular

is a special case of

S knows that-p.

And just as in the model (ordinary perception talk)

Jones sees x

implies that Jones has singled out x in terms of some *fact* about it and is in a position to ascertain by vision *more facts* about it (*see that* x is f, g, h, etc.), so in the approach built on this model there is a commitment to regard the form ‘sensing x’ as logically tied to the form ‘sensing that x is f’.

Let us leave the first and second approaches for a moment, and turn our attention to a third. A relative newcomer to the scene, it equates

S has a sensation of a red triangle

with

There appears to S to be a red and triangular physical object in a certain place.

It follows immediately that it agrees with the second approach that

S has a sensation of a red triangle



does not entail

A red triangle exists

for the ‘appears-’ statement to which it is equivalent in sense does not entail the latter. Once again, however, it must be noted that the category expression ‘sense content’ can be so introduced that

A red and triangular *sense content* exists

has the force of

(ES) (Ex) S has a sensation of  $x^{\odot}$  and x is a red triangle

in which case

S has a sensation of a red triangle

does entail

A red and triangular *sense content* exists.

But the important thing about this *third* approach is that according to it, while the fact that there appears to me to be a red and triangular physical object over there is not itself a *knowing*, it is facts of this kind which are *directly known* in sense perception.<sup>3</sup> Or, to put the same point in the language of sensation, what one directly knows in perception is that one is having sensations (e.g. of a red triangle).

Now facts of the form ‘there appears to x to be a red and triangular physical object over there’ entail (or, perhaps, presuppose) the existence of x and of *there* (and hence Space). Of these

commitments the latter is, for our purposes, the more interesting, in as much as it implies that whereas there may *merely* appear to be a red and triangular object in a certain place, the place itself is not something which might *merely* appear to be. This commitment can, however, be eliminated by rephrasing the above form to read

There appears to x to be a Space (or, perhaps, a spatial system) at a certain place in which a red and triangular physical object is located.

But if we leave aside this refinement, and others which might be introduced, the essence of the third account can be stated as the claim that to know that one is having a sensation of a red triangle is to know that there appears to one to be a red and triangular *physical* object at a certain place. And while there is nothing absurd in the idea that one could directly know such a fact, it does seem absurd to combine this third conception of *sensation* with the thesis of classical phenomenalism. For, one is inclined to expostulate, how can physical objects be patterns of actual and possible sense contents, if to say that a  $\phi$  sense content exists is to say that there appears to someone to be a  $\phi$  physical object somewhere?

It would seem clear that if classical phenomenalism is to get off the ground, it must give a different interpretation of sense contents than that offered by the third approach. It is surely reasonable to say that

Whenever there appears to S to be a red and triangular physical object somewhere, then it is also true that S has a sensation of a red triangle.

But if classical phenomenalism is to be a live option, this cannot be taken to express an identity of sense.

Now I want to suggest that once the above indented statement is taken as synthetic, it is true (though, as we shall see, its converse is not). Whether or not its truth gives support to phenomenalism will emerge in the course of the discussion. But if sensations are not ‘existential appearings’ what are they? Let me say at once that it is a form of the *second* approach which I wish to defend. I shall begin to sharpen distinctions by exploring the differences between approaches *two* and *three*. On neither approach is *having a sensation* a form of *knowing*. On the third approach, however, *but not on the second as I propose to defend it*, *having a sensation* is a form of *thinking*. For having it appear to one that there is a red and triangular physical object over there is a case of thinking in that broad sense in which *wondering*, *wishing*, *resolving*, etc., as well as *judging*, *reasoning*, etc. are modes of thought.

Thus, just as *resolving to do A* is a mode of thought, even though it is not a mere matter of thinking that something is the case, so *its appearing to me that there is a red and triangular physical object over there* is a form of thinking, even though it is not a mere matter of thinking that something is the case. Just as *resolving to do A* involves having the idea of oneself doing A, so the *appearing* requires that the person appeared to have the idea of there being a red and triangular physical object in that place. Clearly the resolving isn’t simply the having the idea of oneself doing A. Equally clearly the appearing isn’t simply a matter of having the idea that there is a real and triangular object in a certain place. *Being appeared to* is a *conceptual*—though not a merely conceptual—state of affairs. One can’t be appeared to unless one has the conceptual framework of physical objects in Space and Time.

Now on the second view, in the form in which I wish to defend it, having a sensation is *not* a conceptual fact.<sup>4</sup> Nor does the ability to have sensations presuppose the possession of a

conceptual framework. To bring out the force of this claim, let us consider the following objection. ‘How’, it might be asked, ‘can

S has a sensation of a red triangle

fail to entail

There is a red triangle

unless having a sensation of a red triangle is a matter of there *appearing to be* (and hence, possibly, *merely* appearing to be) a red triangle?’ To this challenge the answer, in general terms, is that if

S has a sensation of a red triangle

had the sense of

S is in that state which is brought about in normal circumstances by the action on the eyes of a red and triangular physical object

then

S has a sensation of a red triangle

would not entail

There is a red triangle

though it would, of course, entail that there are such things as red and triangular physical objects.

This fact enables me to make the additional point that if the second approach to the status of

sensations made the above move, it would be precluded from holding that the *esse* of red and triangular items *generally* is *percipi*, for the status of ‘red triangle’ in ‘sensation of a red triangle’ would be derivative from that of ‘red and triangular’ in the context of statements about physical objects.

Let us suppose, however, that instead of contextually defining ‘sensation of a red triangle’ in terms of ‘red and triangular physical object’ as suggested above, and by so doing *explaining* the failure of the existential inference,<sup>5</sup> we simply said that it is an *irreducible fact* about sensations that the existential inference is invalid.<sup>6</sup> Classically the ‘non-extensionality’ of the context ‘S has a sensation of (a red triangle)’, the irreducible impropriety of the ‘existential inference’, was interpreted on the model of the logical non-extensionality of the context ‘x is thinking of a red triangle’. With a proper commentary, one which discounts the *conceptual* character of the latter context while highlighting its non-extensionality, the model is a useful one. Unfortunately, in its classical use the conceptual character of the model was *not* discounted.<sup>7</sup> Thus it is worth noting that Aristotle seems to have conceived of sensation as, for example, the awareness of this white thing *as white* (and *as a thing*) thus introducing into sensation the ‘form of judgment’ *S is P*. To do this, of course, is to treat sensation as cognitive and conceptual, and to construe the difference between sense and intellect not as that between a ‘raw material’ which involves *no* consciousness of anything *as thus and so* on the one hand, and any consciousness of something *as thus and so* on the other, but rather between perceptual consciousness of *individual* things as *determinately thus and so*, and consciousness in terms of the general (*All S is P*), the generic (*S is an animal*) and the abstract (*Triangularity is complex*).

Whether or not the ‘irreducible non-extensionality’ form of the second approach is lured by its model into conceptualizing sensation, it is not precluded, as was the form discussed above

which defined sensations of red triangles as states brought about in normal circumstances by the action of red and triangular physical objects on the eyes, from holding that the *esse* of all red triangles is *percipi*, and that except in *derivative* senses, thus as referring to the powers of physical objects to cause sensations of red triangles, ‘red triangle’ occurs properly only in the context ‘S has a sensation of (a red triangle)’ or contexts which unpack into this.

Such a view would be closely related to the claim, so characteristic of modern philosophy, that the *esse* of colours is *percipi*. The distinction between ‘primary’ and ‘secondary’ qualities would turn on the idea that whereas colours have *only* ‘being-for-sense’, shapes, in addition to having ‘being-for-sense’ *qua* immediately perceived would have unqualified being in the physical world as well.

But the idea that it is a basic or underivative fact about sensations that the ‘existential inference’ is invalid need not be combined with the idea that the *esse* of all colours or shapes is *percipi*.<sup>8</sup> And if it is not, then we get a version of the second approach to sensation according to which the statement

Sensations of red triangles are those states of perceivers which are brought about in normal circumstances by the action of red and triangular physical objects on the eyes would not be an analytic statement, resting on a contextual definition of ‘sensation of a red triangle’, but would either be a *synthetic* statement, or, if *analytic*, would be so by virtue of the definability of ‘red and triangular physical object’ as the sort of physical object which in normal circumstances causes perceivers to have sensations of red triangles.

A few paragraphs back I made the point that if sensation talk is logically—and not merely historically or genetically—built upon the framework of physical objects, then classical phenomenalism cannot get off the ground. This consideration eliminates, as materials for a

phenomenalist construction, sense contents as construed by the third—or ‘appearing’—approach to sensation. It also eliminates that form of the second approach which *equates*

S has a sensation of a red triangle

with

S is in that state which is brought about in normal circumstances, etc.

Of the alternatives we have examined, then, the phenomenalist is left with (a) the form of the second approach which rejects the above equation and takes the category of sensation to be an *irreducible* category for which the inference from ‘S has a sensation of a red triangle’ to ‘(Ex) x is a red triangle’ does not obtain; (b) the first approach, i.e. the sense datum theory.

According to the first approach, it will be remembered, there simply are such things as red and triangular expanses. They are ‘directly perceived’ and it is directly perceived *that* they are *thus-and-so*, i.e. red and triangular. (That it may take skill and a special ‘set’ to discriminate these expanses and the direct perception of them within the larger context of naive experience is granted.) It has already been pointed out above that this approach, having as it does ordinary perception talk as its model, does not readily permit of an *esse est percipi* interpretation of the objects of direct perception. The closest approximation to such a principle it can accommodate would involve a distinction between

S directly sees x; S directly sees that-p

as *cognitive* facts and, to stipulate a new use for the verb ‘to sense’,

S senses x

which would stand for the fact that x stands in a certain *non-cognitive* relation to S. To say that the *esse* of sense contents is *being sensed* would be to say that sense contents occur only in this *non-cognitive* relation to S. Thus, it might be held that sense contents occur only in the context of a certain kind of cortical process, or only as elements of a system of sense contents, for example in what H. H. Price has called ‘somatocentric bundles’. Notice that the claim that the *esse* of sense contents is in either of these ways *being sensed* is compatible with the idea that there are or might be sense contents which are not directly perceived or ‘sensed’ in a *cognitive* use of this term.

### III. Possible Sense Contents

Let us grant, then, provisionally, that there is available for the phenomenalist an account of sense contents which does not rule out his enterprise *ab initio*. The next step, as specified by our programme, is to explore what might be meant by the phrase ‘possible sense content’. Here the essential point can be made quite briefly, though its implications will require careful elaboration. A ‘possible’ sense content in the desired meaning of ‘possible’ would be more aptly referred to as a *conditional* or (to use Mill’s term<sup>9</sup>) *contingent* sense content. The logical structure of this concept can best be brought by an analogy. Suppose we use the phrase ‘conditional skid’ to refer to a skid which *would* take place if a certain driver *were* to do something, e.g. swerve. A beginning driver is constantly aware of the ‘existence’ of conditional skids, collisions, etc., relatively few of which, fortunately, become actualized.

Notice that the contrasting term to ‘possible skid’ in the sense of *conditional* or *contingent skid* will be ‘actual skid’ *not* in the sense of *actually existing skid*, but simply as used to refer to skids *in the ordinary sense of the term* as contrasted with the conditional skids which



are contextually defined in terms of them. Thus ‘actual skid’ differs from ‘skid’ only by calling attention to the contrast between skids and conditional skids.

Let us, therefore, explore what it would mean to say that at a certain time and place there was a conditional skid. Obviously a conditional skid does not exist merely by virtue of the fact that the statement ‘such and such a motion of such and such a car on such and such a surface occurred at this time and place’ is both logically and physically self-consistent. ‘Conditional’ involves a reference to *existing circumstances*, to *alternative courses of action* and to the *outcome* of these courses of action in the existing circumstances. The sense of ‘possible’ (=‘conditional’) which we are exploring must also be carefully distinguished from the *epistemic* sense of ‘possible’ illustrated by

It is possible that it will rain tomorrow

This sense, like the one we are defining, is also not simply a matter of the logical and physical self-consistency of the statement ‘It will rain tomorrow’. It is a cousin of ‘probable’ and the above statement has, roughly, the sense of

The presently available evidence is compatible with the idea that it will rain tomorrow. The sense we have in mind, on the other hand, is, so to speak, ontological rather than epistemic. It says how things stand, not how we stand with respect to evidence about how things stand.

Consider the following statements, where x is a piece of salt:

x is soluble

It is possible that x will shortly dissolve

A possible dissolving of x exists.

The first statement says simply that if x were put in water it would dissolve. It is compatible with the idea that x is in an inaccessible place miles away from water. The second statement, which involves the *epistemic* sense of ‘possible’ claims that the available evidence is compatible with the idea that x will shortly dissolve, and hence rules out the idea that *the evidence points to* the above description of the circumstances. The third statement—a contrived one, obviously, *but so is the language of possible sense contents*—claims that the circumstances of x are such as to leave open to us at least one course of action which would eventuate in the dissolving of x, and hence rules out the above description of the circumstances.

Notice that in statements of the kind we are considering agents and circumstances do not come into the picture in the same way. Roughly circumstances come in as *actualities*, agents come in as *having powers*. Thus, returning to the example of the skid, we have

The circumstances of the driver are such, and his capacities to move his limbs are such, that there is at least one move he can make which would result in a skid.

We are clearly in the region of difficult problems pertaining to the conceptual framework of *conduct*. What is an action? What is the scope of ‘circumstances’? Could a person ever have done something other than what he actually did? etc., etc.<sup>10</sup> Fortunately these problems are tangential to our investigation. For our purpose the significant feature of the above analysis of a ‘possible’ or ‘conditional’ skid is the implied reference to general principles (laws of nature) about what circumstances are consistent with the performance of what actions and about what would eventuate if the agent were to do an action of a certain kind which he is able to do in his circumstances. For, to bring the matter to a head, to say that E would eventuate if X, who is in circumstances C, were to do A, is to imply that it is a general truth that

When A is done in C, E eventuates

This general truth may be either 'strictly universal' or 'statistical'. The important thing is that it is *factual*, i.e. that it is not *logically* true. Thus, if the belief in such a generalization is to be a *reasonable* one, the reasons must be of an inductive character. This points to inductive arguments of the form

In observed cases of A being done in C, E has invariably (usually) eventuated

So, (in all probability) doing A in C invariably (usually) eventuates in E.

If we transfer these considerations from the case of the possible skid to the case of the possible sense content, a number of points can be made at once. To begin with, we must distinguish between

- (a) the fact that the circumstances of perception are of kind C;
- (b) the fact that the perceiver can do A; and
- (c) the fact that doing A in C (usually) eventuates in having a sense content of the kind in question

Now we can readily imagine that someone who, though a friend of sensations and sense contents, is not engaged in defending classical phenomenalism might well illustrate these distinctions by putting himself in a position in which he can truthfully say

- (a') I am standing, eyes closed, facing a fireplace in which a fire is burning.
- (b') I am not blind and can open my eyes.
- (c') Opening my eyes when facing a fire usually eventuates in my having toothy orange and yellow sense contents.

He might well say in these circumstances that a possible or conditional toothy orange and yellow sense content exists.

Suppose, however, that he undertakes to defend the idea that 'physical objects are patterns of actual and conditional sense contents' where 'conditional sense content' has the sense we have been explicating. What moves can he be expected to make? The simplest move would be to start with the above model for interpreting the existence of conditional sense contents, but claim that each of the three statements, (*a'*), (*b'*), and (*c'*), can be reformulated in terms of sense contents. *But what sort of sense contents? Actual? Or both actual and conditional?*<sup>11</sup> This question probes to the heart of the matter. For if the presuppositions of statements asserting the existence of conditional sense contents are such as are ordinarily formulated in terms of physical objects, persons, sense organs, etc., as above, then the claim that physical objects are patterns of actual *and conditional* sense contents implies that when reformulated in terms of sense contents, these presuppositions refer to conditional as well as actual sense contents which *in their turn* presuppose generalizations, and if these generalizations are also such as are ordinarily formulated in terms of physical objects, persons, sense organs, etc., then we are faced with the absurdity of generalizations which are such that their own truth is presupposed by the very meaning of their terms. This vicious circularity finds its partial expression in the fact that if the reformulation from the language of physical objects to the language of sense contents were carried on step by step it would not only be an endless regress, but would involve a *circulo in definiendo*, 'eye', for example, being explicating in terms of 'eye'.

The assumption that the general truths presupposed by the existence of conditional sense data are such as are ordinarily formulated in terms of physical objects, eyes, etc., also has for a consequence that those generalizations could never be supported by instantial inductions the

premises of which referred to actual sense data only. For since the terms of the supported generalizations refer to actual *and conditional* sense contents, the premises would have to do so as well. Indeed, the truth of the premises for such a generalization would presuppose the truth of such generalizations.

The preceding argument has been based on the assumption that the general truths presupposed by the existence of conditional sense contents are such as are formulated in ordinary language by statements relating sensations to the physical and physiological conditions of perception. This consideration suggests that all the classical phenomenalist need do by way of reply is to insist that there are *independent*<sup>12</sup> general truths about sense contents the terms of which involve no reference to conditional sense contents, and which can therefore be supported by instantial inductive arguments the premises of which refer to actual sense contents only. To probe more deeply into classical phenomenalism we must, therefore, examine this new claim. Are there inductively establishable generalizations about the occurrence of sense contents which make no reference to either physical objects or conditional sense contents? Can we, in short, explain conditional sense contents in terms of actual sense contents?

Now there is no contradiction in the idea that there are (perhaps statistical) uniformities which specify the circumstances in which sense contents of a certain kind occur in terms of actual (i.e. not conditional) sense contents. Are there any such? Here we must be careful to distinguish between two radically different kinds of generalization.<sup>13</sup> Let us call them *accidentally autobiographical* (A-generalizations) and *essentially autobiographical* (E-generalizations) respectively. If one fails to distinguish between them, the fact that there are true generalizations of one kind may deceive him into thinking that there are true generalizations of the other.

The difference between the two kinds of generalization is that between

Whenever (or for the most part whenever) I have such and such a pattern of sense contents, I have a sense content of the kind in question

(1) where it makes good sense to suppose that the generalization remains true if 'anybody' is substituted for 'I', and (2) statements of the same form where it is clear that the generalization would not remain true if the substitution were made. The former are A-generalizations; the latter E-generalizations.

Now it is reasonably clear that there have been uniformities in my immediate sense history. It is notorious that the antecedents must be very complex in order to discount the circumstances (e.g. blinks, getting one's hand in the way, etc., etc.) which upset simple apple-carts. But if I am guarded enough in my conception of the antecedent, it will indeed have been followed (for the most part) by the consequent in my past experience. Before we ask ourselves whether such uniformities in a person's sense history can serve as premises for an inductive argument, and whether, if they can, the evidenced generalizations can do the job required of them by the phenomenalist, let us imagine someone, Mr. Realist, to comment on the above as follows:

I grant that such past uniformities can be discovered, but surely I have come to discover them while conceiving of myself as a person, having a body, and living in an environment consisting of such and such physical objects (my house, this fireplace, the road out front, the wallpaper, etc.). I cannot even imagine what it would be like to discover them without operating within this conceptual framework.

To which we can imagine someone, Mr. Phenomenalist, to reply:

I grant that in the ‘context of discovery’ your coming to notice these uniformities transpired within the framework you mention; but surely in the ‘context of justification’ these uniformities stand on their own feet as evidence for inductive generalizations about sense contents.

Mr. Realist is likely to retort:

Surely it is paradoxical to grant that the noticing of the uniformities occurs within the conceptual framework of persons and things in space and time, while insisting that this framework is one in which physical objects are patterns of actual and conditional sense contents. For, *ex hypothesi*, the notion of a conditional sense content is to be explicated in terms of the kind of uniformity which is discovered while using the framework.

and Mr. Phenomenalist to counter with:

The *historical* or *genetic* fact that a child is taught the conceptual framework of persons and things in space and time and later uses this framework in the discovery of the complex uniformities which are presupposed by conditional sense contents is not incompatible with the *logical* claim that this framework is reducible to the framework of sense contents, actual and conditional. Surely the intersubjective conceptual framework which is the common heritage of countless generations can embody a wisdom which the individual must scratch to acquire ...

It is at this point that the distinction drawn above between the two kinds of generalization about actual sense contents becomes relevant. For if we ask, ‘Are the uniformities we have found to obtain in our past experience such that if they could serve as inductive evidence for sense

content generalizations, the conditional sense contents they would make available would serve the phenomenalist's purposes?' the answer must be a simple 'No'. For the uniformities each of us finds are not only autobiographical, they are expressions of the fact that each of us lives among *just these individual physical objects*. The uniformities I find are bound up with the fact that my environment has included wallpaper of such and such a pattern, a squeaky chair, this stone fireplace, etc., etc. My having had *this* pattern of sense contents has usually eventuated in my having had *that* sense content, because having *this* pattern of sense contents guarantees, for example, that I am awake, not drugged, wearing my glasses and looking at the fireplace. And a generalization which is an expression of the contingencies of my existence can scarcely be one of the generalizations which, in the intersubjective conceptual heritage of the race, support the phenomenally conditional sense contents postulated by the phenomenalist. Thus, even granting that there are inductively warranted generalizations which permit the definition of phenomenally conditional sense contents, the latter will be logically tied to the peculiarities of my environment in such a way that they cannot be transferred to other things in other places.

What the phenomenalist obviously wants are generalizations which will serve the same purpose as the familiar principles about what people generally experience in various kinds of circumstances, but which will not lead to circularity or vicious regress when put to phenomenalist use. But these principles are *impersonal*, applying, with qualifications which allow for individual, but in principle repeatable, differences, to all perceivers. In other words, what the phenomenalist wants are generalizations, in sense content terms, which are *accidentally* autobiographical, generalizations in which the antecedent serves to guarantee *not* that I am in the presence of *this individual* thing, e.g. my fireplace, but rather that my circumstances of perception are of a certain *kind*. What he *wants* for his antecedents are patterns of sense contents



which are the actual sense content counterparts of the kinds of perceptual circumstances which common sense expresses in the language of persons, sense organs, and physical things. The best he can *get*, however, are essentially autobiographical uniformities in which the antecedents, however complex, are the actual sense content counterparts of the presence to *this* perceiver of *these individual things*.

In pinpointing our argument to the effect that the phenomenal uniformities we actually can put our fingers on cannot serve the phenomenalist's purpose, we have had to neglect equally telling considerations. Thus, we have permitted the phenomenalist to refer to perceivers and their personal identity in stating his phenomenal uniformities, without raising the objection that these concepts are part and parcel of the framework of physical things in space and time. We could do this because it is clear that the phenomenalist would simply retreat to the idea of an actual-phenomenal counterpart of a person, and there would have been no point in criticizing this notion until we had explored his account of the framework of persons and physical things alike. We are now in a position to press our offensive on a broader front. For if we are correct in asserting that autobiographical generalizations of the sort which could find support in the uniformities which have occurred in our sense histories could not authorize the conditional sense contents required by the phenomenalist's analysis, we can now make the stronger point that these uniformities are precluded from serving as instancial evidence for these putative autobiographical generalizations. For these uniformities come, so to speak, with dirty hands. Once it is granted that the framework of physical things is not reducible to that of actual and conditional sense contents, and, in effect, this is the burden of our argument to date, we see that the very selection of the complex patterns of actual sense contents in our past experiences which are to serve as the antecedents of the generalizations in question presuppose our common sense knowledge of ourselves as perceivers,

of the specific physical environment in which we do our perceiving and of the general principles which correlate the occurrence of sensations with bodily and environmental conditions. We select those patterns which go with our being in a certain perceptual relation to a particular object of a certain quality, where we know that being in this relation to an object of that quality normally eventuates in our having the sense content referred to in the consequent. Thus, the very principles in terms of which the uniformities are selected carry with them the knowledge that these uniformities are *dependent uniformities which will continue only as long as these particular objects constitute one's environment*, and hence preclude the credibility of the generalization in sense content terms which abstract consideration might lead us to think of as instantially confirmed by the past uniformities.

The fact that the noticing of complex uniformities within the course of one's sense history presupposes the conceptual picture of oneself as a person having a body and living in a particular environment of physical things will turn out, at a later stage of the argument, to be but a special case of the logical dependence of the framework of private sense contents on the public, inter-subjective, logical space of persons and physical things.

One final remark before closing this section. It should be noticed that although the uniformities we have been considering are biographical facts about individual persons, there is a sense in which they imply impersonal truths about all perceivers. For we know that if *anybody* with a similar perceptual equipment were placed in our environment, (roughly) the same uniformities would obtain in his immediate experience. As is made clear by the preceding argument, however, this knowledge is not an induction from uniformities found in our immediate experience, but simply one more consequence of our framework knowledge about persons, physical things, and sense perception.

#### IV. The New Phenomenalism

The view we have been discussing, and which we have called classical phenomenism, has fallen from its high estate of a few short years ago. It has been explicitly abandoned by many of its most ardent proponents, including most of those who brought it to its present state of intricate sophistication by their successive attempts to strengthen it against ever more probing criticism. And these defections have by no means been offset by new recruits. One might therefore be tempted to conclude that the above tortuous argument was a waste of time, and that the task of exploring the whys and wherefores of classical phenomenism should be left to the historian. There might be something to this contention if philosophers had abandoned classical phenomenism for the right reasons and with a clear understanding of its inadequacies. That this is not the case is the burden of the present section.

The point can best be introduced by noticing that the decline of the claim that the framework of physical objects is 'in principle' *translatable* into the framework of sense contents has been accompanied by the rise of the claim, often by the same philosophers, that even if such a translation is 'in principle' impossible, nevertheless there is a sense in which only sense contents *really* exist. This new phenomenism can best be understood by comparing it with a form of realism which is almost its twin.

In the early years of the century, certain philosophers in the Lockean tradition were wont to argue that the framework of physical objects is analogous to a *theory*. Just as it is reasonable to suppose that there are molecules although we don't *perceive* them, because the hypothesis that there are such things enables us to explain why perceptible things (e.g. balloons) behave as they do, so, they argued, it is reasonable to suppose that physical objects exist although we do not

*directly perceive* them, because the hypothesis that there are such things enables us to understand why our sense contents occur in the order in which they do.

This neo-Lockean approach responded to the venerable challenge, ‘How can evidence in terms of sensations alone provide inductive reasons for supposing that sensations are caused by material things?’ by granting that *instantial* induction cannot do the trick and appealing, instead, to that other mode of inductive argument, so central to modern physical science, the ‘hypothetico-deductive method’. I shall shortly be arguing that this appeal was in principle misguided, and that, to put the matter in the form of a paradox, a necessary condition of the success of the appeal is the viability of classical phenomenalism; which would mean, of course, that it only *seems* to get off the ground.

But before making a frontal attack on Hypothetico-Deductive Realism, I shall first show how closely it is related to what I have called the New Phenomenalism. The point is a simple one. The New Phenomenalism can be regarded as that variant of Hypothetico-Deductive Realism which accepts the claim, characteristic of positivistic philosophies of science, that theoretical entities are ‘calculational devices’ and do not exist in the full-blooded sense in which observables exist. Just as certain philosophers of science were prepared to say that

atoms, electrons, etc. don’t really exist. Frameworks of so-called scientific objects are pieces of conceptual machinery which enable us to derive observational conclusions from observational premises. Frameworks of scientific objects cannot be translatable into the framework of observable fact, not, however, because they refer to *unobservable* entities, but because the very idea that they refer to *anything* is an illegitimate extension to theoretical terms of semantical distinctions appropriate to the language of observable fact

so there is a current tendency, particularly among ex-phenomenalists of the ‘classical’ variety to argue that

although the framework of physical objects is not translatable into the framework of sense contents, this is not because it refers to entities over and above sense contents. It is merely a conceptual device which enables us to find our way around in the domain of what we directly observe in a manner analogous to the role played by scientific objects with respect to the domain of the observable in a less stringent sense of this word.

It is my purpose to argue that this won’t do, *not* however, on the ground that ‘real existence’ should not be denied to theoretical entities—though, indeed, I agree that it should not<sup>14</sup>—but rather on the ground that the relation of the framework of physical objects to the framework of sense contents cannot be assimilated to that of a micro-theory to its observation base. To see that this is so requires no more than a bringing together of certain themes from the preceding section of the paper with the standard account<sup>15</sup> of the relationship between theoretical and observational frameworks.<sup>16</sup>

According to what I have referred to as the ‘standard’ account of the role of theories, a theoretical framework is an uninterpreted deductive system which is co-ordinated with a certain sector of the framework of observable things in such a way that *to each inductively established generalization in this sector there corresponds a theorem in the calculus, and that to no theorem in the calculus does there correspond a disconfirmed inductive generalization in the observation framework*. The co-ordination is done by ‘correspondence rules’ which are in certain respects analogous to definitions in that they correlate defined expressions in the theoretical framework (e.g. ‘average momentum of a population of molecules’) with empirical constructs in the framework of observation (e.g. ‘pressure of a gas’). The correspondence rules provide only a

partial co-ordination (a ‘partial interpretation’) in that they are not strong enough to permit the derivation of rules coordinating the primitive expressions of the theory (e.g. ‘molecule’) with observational counterparts.

There are many interesting facets to this account of the tie between theoretical and observational discourse. The one which is directly relevant to our argument, however, is expressed by that part of the above summary statement which has been put in italics, according to which the tie between theoretical and observational discourse is a matter of coordinating *inductive generalizations* in the latter with theorems in the former. The significance of this point should be obvious. To claim that the relationship between the framework of sense contents and that of physical objects can be construed on the above model is to commit oneself to the idea that there are inductively confirmable generalizations about sense contents which are ‘in principle’ capable of being formulated without the use of the language of physical things. If the argument of the preceding section was successful, this idea is a mistake.

A few paragraphs ago I made the point that the New Phenomenalism can be construed as that form of Hypothetico-Deductive Realism which denies that theoretical entities ‘really exist’. To this it can now be added that the success of the New Phenomenalism presupposes the success of the old. Hence the New Phenomenalism is either mistaken or superfluous; and if it is mistaken neither Classical Phenomenalism nor Hypothetico-Deductive Realism is available as an alternative.

#### V. Direct Realism: Causal versus Epistemic Mediation

What, then, is the alternative? Surely to scrap the premises that led to this impasse by affirming that physical objects are really and directly perceived, and that there is no more basic

form of (visual) knowledge than *seeing* physical objects<sup>17</sup> and *seeing that* they are, for example, red and triangular on this side. But to make this affirmation stick it is essential to realize that it does not commit one to the view that the only items in visual experience which can be *directly known* are physical matters of fact. Thus it is perfectly compatible with the idea that people can *directly know* that there seems to be a red and triangular physical object in a certain place, and, I shall argue, with the idea that people can *directly know* that they are having a certain visual impression (e.g. an impression of a red triangle).

What can properly be meant by speaking of a knowing as ‘direct’? Clearly the use of the modifier is intended to imply that the knower has not *inferred* what he knows. But this is no mere psychological point. For one only knows what one has a right to think to be the case. Thus to say that someone directly knows that-p is to say that his right to the conviction that-p essentially involves the fact that the idea that-p occurred to the knower in a specific way. I shall call this kind of credibility ‘trans-level credibility’, and the inference schema

X’s thought that-p occurred in manner M

So, (probably) p

to which it refers, as trans-level inference. The problem of spelling out the principles of trans-level inference and explaining their authority is a difficult one which far transcends the scope of this chapter. The above remarks are at best an indication of the direction in which a discussion of the ‘directness’ of direct knowledge would move. I cannot pass up the opportunity, however, to emphasize once again the inextricable mutual involvement of trans-level and same-level inference in the justification of empirical statements.<sup>18</sup>

The distinction within visual perception between what is directly known and what is not must be carefully drawn if one is not to backslide into representationalism. Thus the fact that there is a sense in which my knowledge that this is a book and in all probability red and rectangular on the *other* side is an *inference* from my perception that this *physical object* is red and rectangular on *this* side, must not be confused with the idea that my knowledge that this is a book, etc., is an inference from a ‘direct seeing’ of a red, flat, and rectangular ‘surface’. We saw in Section I that the perception that this physical object is red, flat, and rectangular on this side is a direct but limited perception of a *physical object*. Its limitations are characteristic of most visual perception, though they are minimized in such cases as the perception of a cube of pink ice.

Again, the fact that my knowledge that I am having a sensation of a red triangle, or that there seems to me to be a red and triangular object over there, is more *secure* than my perception that this physical object is red and rectangular on this side does not impugn the latter’s status as direct knowledge. For (a) the fact that on occasion I *can* infer that there *is* a physical object in front of me which *is* red and triangular on this side from the fact that there *seems* to me to be a physical object in front of me which is red and triangular on the facing side, or from the fact that I am having a sensation of a red triangle, by no means requires that such knowledge is always a conclusion from such premises; and (b) the frameworks of qualitative and existential appearances and of sense impressions are parasitical upon discourse concerning physical things. The latter is obvious in the case of the framework of appearances; it is equally true, if less obviously so, in the case of the framework of sense impressions, as I shall shortly attempt to show.

But before reviewing the status of sense impressions and sense contents in the light of the above remarks, let us remind ourselves that while the direct realist rejects the view we have



called classical phenomenalism, he is nevertheless phenomenalist in the broad sense characterized in the opening paragraphs of this paper. For it holds that although things frequently appear other than they are, they *are* as they appear to be under advantageous circumstances. Thus, to take an example we have already used, a pink ice cube is a directly perceived, public, cold, solid, smooth, pink physical object having the familiar thermal and mechanical causal properties of ice. In advantageous circumstances it

- (a) appears to perceivers to be pink and cubical;
- (b) is responsible for the fact that there appears to these perceivers to be a pink and cubical physical object in front of them;
- (c) causes these perceivers to have impressions of a 'pink cube'.<sup>19</sup>

Again, the phenomenal world, thus conceived, of public physical objects, sounds, flashes, etc., exhibits a lawfulness which is formulable in phenomenal terms, i.e. in terms of the directly perceptible qualities and relations of these objects. (Generalizations which are in this sense phenomenal must not, of course, be confused with the generalizations in sense content terms which we found to be snares and delusions.) And since there are such generalizations, it is here, rather than at the level of sense contents, that we find a *pou sto* for the apparatus of hypothetico-deductive explanation, the introduction of theoretical entities to explain why observable (phenomenal) objects behave as they do.

At this point it is imperative that our direct realism be sufficiently critical. And to make it so requires three steps which will be seen to be closely related as the argument proceeds. The *first* step is the abandonment of the abstractive theory of concept formation in all its disguises. In its simplest form this theory tells us that we acquire our basic equipment of concepts from the direct perception of physical objects as determinately red, triangular, etc. Thus, we come to be

able to think of an *absent* object as red by virtue of having directly perceived *present* objects *as* red. Having the concept of red presupposes the direct perception of one or more objects *as* red, the direct perception *that they are red*. This is at best a misleading half-truth. For while one does not have the concept of red until one has directly perceived something *as* red, *to be* red,<sup>20</sup> the coming to see something as red is the culmination of a complicated process which is the slow building up of a multi-dimensional pattern of linguistic responses (by verbal expressions to things, by verbal expressions to verbal expressions, by meta-linguistic expressions to object-language expressions, etc.) the fruition of which as conceptual occurs when all these dimensions come into play in such direct perceptions as that this physical object (not that one) over here (not over there) is (rather than was) red (not orange, yellow, etc.). Thus, while the coming to be of a basic empirical concept coincides with the coming to be of a direct perception that something is the case, the abstractive theory, as Kant saw, makes the mistake of supposing that the logical space of the concept simply transfers itself from the objects of direct perception to the intellectual order, or better, is transferred by the mind as Jack Horner transferred the plum. The idea that this logical space is an evolutionary development, culturally inherited, is an adaptation rather than a rejection of Kant's contention that the forms of experience are *a priori* and innate.

We are now able to see that his conception of the forms of experience was too narrow, and that non-formal patterns of inference are as essential to the conceptual order as the patterns explored by formal logic, Aristotelian *or* mathematical.

To nail down this point, we must take the *second* step towards an adequately critical direct realism. This step consists in the recognition that the direct perception of physical objects is mediated by the occurrence of sense impressions which latter are, in themselves, thoroughly non-cognitive. Step *three*: this mediation is causal rather than epistemic. Sense impressions do

not mediate by virtue of being known. With these remarks, we pick up once again the discussion of sensations and sense contents which was interrupted that we might lay the ghost of classical phenomenalism.

## VI. Sense Impressions Again

From the point of view we have now reached, sense impressions can, *as a first approximation*, be construed as entities postulated by a theory (at first common-sensical, then more and more refined) the aim of which is to explain such general truths as that when people look in mirrors in front of which there is a red object, there seems to them to be a red object ‘behind the mirror’, and other facts of this kind.

The significance of the phrase ‘as a first approximation’ will come out in a moment. But before I make any other moves, I must emphasize that the following argument presupposes that the ‘calculational device’ interpretation of theoretical entities is mistaken.<sup>21</sup> As I see it, to have good reason for holding a theory is *ipso facto* to have good reason for holding that the entities postulated by the theory exist. Thus, when I say that, as a first approximation, sense impressions can be construed as theoretical entities, I am not implying that sense impressions do not ‘really’ exist. Indeed, I should argue, not only do they really exist (since the theory is a good one), we can *directly* know (not merely infer by using the theory) on particular occasions that we are having sense impressions of such and such kinds. This ability directly to know that one is having a sense impression of a certain kind, however, presupposes the inter-subjective logical space of sense impressions as an explanation of such perceptual phenomena as those referred to in the first paragraph of this section. This fact about the logic of sense impressions also finds its expression in the fact that the training of people to respond conceptually to states of themselves

which are not publicly observable requires that trainer and trainee alike (they may be identical) share *both* the intersubjective framework of public objects and the intersubjective theory of private episodes, autobiographical sentences of which (in the present tense) are to acquire the additional role of *Konstatierungen* by becoming symptoms (through conditioning) of inner episodes and recognized as such.<sup>22</sup>

The crucial move in understanding the logic of sense impressions talk, however, is a reprise of a point made early in the chapter when, in the course of discussing the ‘of-ness’ of sense impressions, it was pointed out that if

(a) S has an impression of a red triangle

had the sense of

(b) S is in that state brought about in normal circumstances by the influence of red and triangular physical objects on the eyes

then the truth of (a) would not entail the existence of anything red and triangular.<sup>23</sup> Even if, as will become clear, this account of the meaning of (a) won’t do as it stands, the logical point that (a) has the form

S is in a state of kind  $\phi$ , i.e.  $\phi$  (S)

rather than

(S) R (y)

remains true when it has been corrected.

What, then, is a visual impression (e.g. of a red triangle), if it is not simply that state of a perceiver which is normally brought about by the influence of a red and triangular physical object on the eye? The answer is implicit in the above characterization of the framework of sense impressions as a ‘theory’ certain sentences of which have been enriched by a reporting role. For even where a theoretical state of affairs can be given a definite description (in Russell’s sense) in terms of the phenomena it is introduced to explain, this definite description cannot exhaust the sense of the relevant theoretical expression. If it did, the theory would be no theory at all, but at most the claim that a theory can be found. Clearly what gives sense to the primitive expressions of a formalized theory are in the first place the postulates which connect theoretical states of affairs with one another and in the second place the correspondence rules which connect the deductive system with the phenomena to be explained. Thus, to grasp the sense of the phrase ‘impression of a red triangle’, we must see how this phrase functions in the ‘postulates’ of the framework of sense impressions.

Here we run up against the obvious fact that the framework of sense impressions is *not* a formalized theory. Its ‘postulates’ are formulated in terms of analogies the force and limitations of which must be tickled out piecemeal by exploring the logic of sample uses of the framework. Such an explanation, which, if it were not for the danger of terminological confusion, might be called the phenomenology of sense impressions, is an arduous and time-consuming task which lies beyond the scope of this discussion. In any case, my concern is with broad issues of philosophical strategy, and even a large-scale map of the jungle of perceptual epistemology can bring decisive clarification. I shall therefore limit myself to a summary statement of what I take to be the outcome of such an exploration.

One item stands out above all others. Analysis reveals a *second* way in which the sense of ‘impression of a red triangle’ is related to the sense of ‘red and triangular physical object’. The first has already been characterized by relating ‘S has an impression of a red triangle’ to ‘S is in that state, etc.’ The second consists in the fact that visual impressions of red triangles are conceived as items which are analogous *in certain respects* to physical objects which are red and triangular on the facing side.<sup>24</sup> Here it is essential to note that the analogy is between sense impressions and physical objects and not between sense impressions and *perceptions of* physical objects. Failure to appreciate this fact reinforces the temptation to construe impressions as *cognitive* and *conceptual* which arises from the misassimilation of the ‘of-ness’ of sensation to the ‘of-ness’ of thought.<sup>25</sup> It is also essential to note that the analogy is a trans-category analogy, for it is an analogy between a state and a physical thing. Failure to appreciate this fact reinforces the temptation to construe

S has an impression of a red triangle

as having the form ‘xRy’, where y is a strange kind of particular<sup>26</sup> analogous in certain respects to the facing side of a red and triangular physical object.

With these warnings out of the way, we can turn our attention to the positive analogy. It has two parts:

- (a) Impressions of red, blue, yellow, etc., triangles are implied to resemble-and-differ in a way which is formally analogous to that in which physical objects which are triangular and (red or blue or yellow, etc.) on the facing side resemble-and-differ; and similarly *mutatis mutandis* in the case of other shapes.
- (b) Impressions of red triangles, circles, squares, etc., are implied to resemble-and-

differ in a way which is formally analogous to that in which physical objects which are red and (triangular or circular or square, etc.), on the facing side resemble-and-differ; and similarly *mutatis mutandis* in the case of other colours.

In effect, these analogies have the force of postulates implicitly defining two families of predicates ' $\phi_1$ ' ... ' $\phi_n$ ' and ' $\psi_1$ ' ... ' $\psi_n$ ', applicable to sense impressions, one of which has a logical space analogous to that of colours, the other a logical space analogous to that of the spatial properties of physical things.

In addition to these analogies, the framework of sense impressions involves a causal hypothesis, the general character of which can be indicated by saying that the fact that blue objects appear in certain circumstances to be green, and that in certain circumstances there appear to be red and triangular objects in front of people when there is no object there at all, are explained by postulating that in these circumstances impressions are brought about of the kinds which are normally brought about by blue objects (in the first case) and by red and triangular objects (in the second).

It has sometimes been suggested that the basic mode of existence of colours is 'adverbial', i.e. that the basic mode of existence of blue is expressed by the context 'S senses blue-ly'. This suggestion is typically developed into the idea that physical blue is the power to cause normal perceivers to sense blue-ly. From our standpoint this suggestion, although it contains an important insight, puts the cart before the horse and misconstrues as basic a 'colour' concept which is derived by analogy from colour concepts pertaining to physical objects. The violence done by this construction is reflected both by its paradoxical ring, and the reluctance of its sponsors to extend the same interpretation of the way in which shapes are involved in the impressions of sense.

The sound core of the adverbial interpretation of perceptible qualities consists in the fact that verbal nouns relating to inner episodes presuppose the corresponding verbs. Thus:

x has a circular<sub>s</sub> impression

(where ‘circular<sub>s</sub>’ is the analogical predicate corresponding to ‘circular<sub>p</sub>’) would, from the standpoint of a rational reconstruction, presuppose the form

x is impressed circularly<sub>s</sub>

or, in the active voice,

x senses circularly<sub>s</sub>

Notice that these analogical adverbs are not adverbs of manner comparable to ‘quickly’, ‘clearly’ etc. They combine with ‘senses’ or ‘is impressed’ to constitute the verb, thus ‘senses-circularly<sub>s</sub>’, and ‘is-impressed-circularly<sub>s</sub>’.

## VII. Beyond Direct Realism: A Kantian Critique

The argument to date has been an attempt to spell out the relations which exist between the framework of sense impressions and the framework of physical objects, and by so doing to show exactly why neither classical phenomenalism nor hypothetico-deductive phenomenalism (let alone hypothetico-deductive realism) is a tenable position. But though the primary aim of the argument has been negative, it is clear that the argument up to this point can be more positively construed as a defense of direct realism, and therefore of a position which is phenomenalistic in that broad sense which amounts to the idea that things are, in standard circumstances, what they seem to be. It must now be pointed out, however, that if the argument to date is sound, it has a



momentum which must sweep away even this broad sense of phenomenalism. If it were halted at this point, it would be inconsistent with its presuppositions.

A review of the later stages of the argument discloses that on two occasions essential use was made of premises concerning the status of theoretical frameworks. On the first occasion, the point was made that the correspondence rules of a theory correlate 'theorems' in the language of the theory with inductive generalizations in the framework of the phenomena the theory is designed to explain. Since the point to be made was simply that if there are no inductive generalizations in sense content terms, then the framework of physical objects cannot be construed as a theory analogous to the theories of microphysics, a closer scrutiny of just what it is that theories accomplish by correlating theorems with inductions and just what this correlation amounts to was not called for. On the second occasion, however, an additional theme was introduced, namely, the idea that to have good reasons for espousing a theory which postulates the existence of unobservable entities is to have good reason for saying that these entities really exist. And this idea, as we have noted, runs up against the objection that the entities postulated by theories of this type are and can be nothing but 'computational devices' for deriving observation framework conclusions from observation framework premises, and that even this role is 'in principle' dispensable. For, it is argued, every success achieved by the theory has the form

$$T \rightarrow (O_i \supset O_j)$$

where ' $O_i \supset O_j$ ' is a generalization which relates two kinds of situation definable in the observation framework, and which, though derivable from the theory (including its correspondence rules), must in principle be capable of *independent* inductive confirmation or

disconfirmation. Now, in my opinion, it must be admitted that *if* the observation framework permits the formulation of inductive generalizations—statistical or non-statistical—which hold within limits which can be accounted for in terms of such concepts as accuracy of measurement and experimental error, i.e. the variance of which is purely ‘epistemic’, then the positivistic interpretation of theoretical entities is inescapable. But must we grant the antecedent of this hypothetical? Of course, if we knew that the conceptual framework of perceptible physical objects in space and time had an absolute authenticity, i.e. that the physical objects of the perceptible macro-world as conceived by the direct realist really existed, we would know that any testable consequences to which a theory could call attention would be law-like uniformities, statistical or otherwise, in the behaviour of physical objects. *But do we know that the physical objects of the perceptible world really exist? And is the behavior of macro-objects even statistically lawful in a way which leaves to theories only the job of deriving these laws from its postulates and correspondence rules?* I argue in Chapter 4 that the answer to both these questions is no, and that the negative answer to the *second*, together with the fact that *theories explain why physical objects come as close as they do to conforming to statistical laws which have a purely ‘epistemic’ variance*, is what justifies the negative answer to the *first*.

On the view I propose, the assertion that the micro-entities of physical theory really exist goes hand in hand with the assertion that *the macro-entities of the perceptible world do not really exist*. This position can be ruled out of court only by showing that the framework of perceptible physical objects in space and time has an authenticity which guarantees a parasitical status for the subtle and sophisticated framework of physical theory. I argue in Chapter 5 that the very conception of such absolute authenticity is a mistake. And if this contention is correct, the premise to the effect that theoretical entities really exist,<sup>27</sup> which was used in explaining the

status of sense impressions, requires us to go one step further, once its presuppositions are made explicit, and argue that the physical objects, the perception of which they causally (but not epistemically) mediate, are unreal. It commits us, in short, to the view that the perceptual world is phenomenal in something like the Kantian sense, the key difference being that the real or ‘noumenal’ world which supports the ‘world of appearances’ is not a *metaphysical* world of unknowable things in themselves, but simply the world as construed by scientific theory.

To say that there are no such things as the physical objects of the perceptible world is, of course, to make a point *about* the framework of physical objects, not *in* it. In this respect it differs from the assertion that there are no centaurs. As long as we are *in* the framework of physical objects, of course, we evaluate statements about particular physical objects and the perception of them in terms of the criteria provided by the framework. Direct Realism gives an excellent reconstruction of the ways in which physical things, perceivers, sense impressions, perceptions *of* physical objects, perceptions *that* they are thus and so, privileged access to one’s own thoughts, feelings, and sense impressions, etc., etc., fit together to make one framework of entities and knowledge about these entities. To say that the framework is phenomenal in a quasi-Kantian sense, as I am doing, is to say that science is making available a more adequate framework of entities which *in principle*, at least, could serve all the functions, and, in particular, the perceptual functions of the framework we actually employ in everyday life. It is not, of course, to say that there is good reason to put it to this use. Indeed, there are sound methodological reasons for not teaching ourselves to respond to perceptual situations in terms of constructs in the language of theoretical physics. For while this could, in principle, be done, the scientific quest is not yet over, and even granting that the main outlines are blocked in, the framework of physical objects in space and time, shaped over millennia of social evolution,

provides, when accompanied by correct philosophical commentary, a firm base of operations with which to correlate the developing structure of scientific theory, refusing to embrace any stage without reserve as our very way of perceiving the world, *not* because it wouldn't be a *better* way, but because the better is the enemy of the best.

### VIII. Beyond Sense Impressions

Let me bring this already overloaded chapter to a close by discussing a topic which will bring all of its main themes into one focus. Suppose someone to raise the following objection, 'I can understand the temptation to say that there really are such things as clouds of electrons, etc., but why conclude from this that the physical objects of ordinary perceptual experience don't really exist? Why not simply say that we must revise our conception of them and recognize that while *as perceptible physical objects* they have the qualities of sense, *as systems of imperceptible particles* they have the properties ascribed to them by scientific theory?' I reply that this won't do at all. The attempt to melt together Eddington's two tables does violence to both and justice to neither. It requires one to say that one and the same thing is both the *single* logical subject of which an *undefined* descriptive predicate (e.g. 'red') is true,<sup>28</sup> and a *set of logical subjects* none of which is truly characterized by this predicate, thus raising all the logical puzzles of 'emergence'. And if, as is often done, 'red' as predicable of physical objects is tacitly shifted from the category of *primitive* descriptive predicates (where it properly belongs) to the category of *defined* descriptive predicates by being given the sense of 'power to cause normal observers to have impressions of red', then the very stuffing has been knocked out of the framework of physical objects, leaving not enough to permit the formulation of the very laws which are

implied by the existence of these powers, and which are pre-supposed by the micro-theory which might be invoked to explain them.

The point I have in mind is essentially the same as that on which our critique of classical phenomenalism was based. For to suppose that the qualities of physical things are *powers* is to overlook the fact that the occurrent properties of physical objects are presupposed by the laws which authorize *both* the ascription to ‘circumstances’<sup>29</sup> of powers to manifest themselves in the sense contents of percipients (stressed by power phenomenalism) *and* the assertion of subjunctive conditionals about the sense contents which would eventuate for a perceiver were such and such (phenomenal) conditions to be satisfied (stressed by classical phenomenalism).<sup>30</sup> As a matter of fact, the subjunctive conditionals of classical phenomenalism can be reformulated in the language of ‘powers’ as the ‘passive’ counterparts of the ‘active’ powers of ‘circumstances’ to manifest themselves in the immediate experience of perceivers, i.e. as the powers of perceivers to be appeared to by the ‘circumstances’.<sup>31</sup>

But if the alternative to saying that physical objects are both single logical subjects for primitive predicates like ‘red’ and sets of logical subjects for micro-theoretical predicates is the position, defended in the preceding section, that physical objects with their occurrent qualities don’t really exist, where do their qualities, e.g. colour, really exist? What really exists and has them, if physical objects do not? This question requires an answer in three stages.

The *first* stage consists in the statement that *nothing* really has them. The logic of the colour predicates of the framework of physical objects is such that only a physical object<sup>32</sup> *could* have colour in this sense of the term, and *ex hypothesi* there are none.

The *second* stage consists in pointing out that our argument has led us to the idea that while visual sense impressions are not, of course, coloured in the sense in which physical objects

are coloured, they do have intrinsic properties which have a logical space formally similar to the logical space of the colours of physical things. And this suggests that in the scientific picture of the world the counterparts of the colours of the physical object framework will turn out to be aspects, in some sense, of the percipient organism.

The *third* stage begins with the reminder that when we abandon the framework of physical objects, our conception of a *person* cannot remain inviolate. In the pre-theoretical framework of physical objects, living things, and persons, the situation is much as presented in classical philosophy at its best. A person is a single logical subject, not a set of logical subjects. The Aristotelian includes the physical aspects of persons in this single logical subject by attributing only a ‘virtual’ existence to the physical parts of the body construed as logical subjects. This requires that statements about what the legs, hands, etc., of a person are doing be construed as expressible in terms which mention no logical subject other than the person as a whole. For the Aristotelian, the term ‘leg’ as referring to a part of a person, and the term ‘leg’ as referring to amputated limbs would have radically different *logical* grammars. The Platonist, for a number of reasons into which we need not enter, prefers a framework in which a person consists of a person and a body, thus permitting the latter to be an actual plurality of logical subjects.<sup>33</sup> The Platonist hesitates as to whether sense impressions belong to the body or to the *psyche*. On the whole, he takes the latter course, though constantly tempted to divide the *psyche* into a team consisting of a rational, a sentient, and (perhaps) a vital *psyche*. The former course, as is implied by the preceding footnote, would require an Aristotelian approach to the sentient body.

The purpose of the above quasi-historical remarks is to remind the reader that in the common sense framework of persons and physical objects as we have described it, thoughts and

sense impressions are adjectival to single logical subjects (as contrasted with sets of logical subjects). What are we to make of these single logical subjects in the light of scientific theory? And, in particular, is there any reason to suppose that in a new synthesis there will be logical subjects for yet other analogues of the colour predicates (and geometrical predicates) of the framework of physical objects? If so, these counterparts twice removed would not be *adverbial* (as in the last analysis are the predicates of sense impressions)<sup>34</sup> and we could say with good conscience that it is these logical subjects which ‘really have the colours and shapes which physical objects seem to have’. But what a difference there would be between what we would mean by saying this, and the sense it has as usually advanced.

The basic roadblock is the unity of the person as the subject of conceptual activities. To do justice to this unity we must, it would seem, take it to be ultimate and irreducible, and, in effect, commit ourselves to either a Platonic or an Aristotelian ontology of the ‘I’. That this is not so is the fruit of a line of thought initiated by Kant.<sup>35</sup> As in the case of the status of the framework of physical objects, he sketched the *form* of a solution, giving it, however, a *metaphysical* content which must be replaced by scientific considerations. The heart of the matter is the fact that the irreducibility of the ‘I’ within the framework of first person discourse (and, indeed, of ‘you’ and ‘he’ as well) is compatible with the thesis that persons can (in principle) be exhaustively described in terms which involve no reference to such an irreducible logical subject. For the description will *mention* rather than *use* the framework to which these logical subjects belong. Kant saw that the transcendental unity of apperception is a form of experience rather than a disclosure of ultimate reality. If persons are ‘really’ multiplicities of logical subjects, then unless these multiplicities used the conceptual framework of persons there would be no persons. But the idea that persons ‘really are’ such multiplicities does not require

that concepts pertaining to persons be *analysable into* concepts pertaining to sets of logical subjects. Persons may ‘really be’ bundles, but the concept of a person is not the concept of a bundle.

Suppose, then, we take a neo-Hobbesian line with respect to the conceptual activities of persons, and construe these activities on the model of the computational activities of an electronic robot, one, however, which is capable of responding to its own computational activities in the language of persons.<sup>36</sup> What would be the implications of this line for the status of sense impressions? The immediate consequence is obvious. By ‘identifying’ in the above manner a person with a plurality of logical subjects, i.e. the constituent parts of the ‘computer’, we have undermined the logic of sense impressions. For whether these parts be construed as material particles or as nerve cells, the fact that they are a plurality precludes them from serving either jointly or separately as the subjects of the verb ‘to sense red-triangle-wise’. We must therefore either introduce another logical subject (an immaterial substance) to do this work, or turn each sensing into a logical subject in its own right, i.e. introduce a new category of entity (‘phantasms’ or ‘sensa’ we might call them) with predicates the logical space of which is modelled on that of visual impressions, as the latter was modelled on that of coloured and shaped physical objects. To one who is confronted by these alternatives, the familiar facts about the dependence of sense impressions on brain processes are bound to point in the second direction, which is, in effect, that of the epiphenomenalism of Hobbes.

Epiphenomenalism is a far more radical dualism than the Cartesian dualism of matter and mind. For the latter is, at least in intention, a dualism of interacting substances. Phantasms, being the counterparts of the having of sense impressions, are fleeting particulars with none of the attributes of thinghood. They neither act nor are acted on, but simply occur. Their impotence is



logical, rather than a puzzling empirical fact. They are the prototype of the ‘events’ into which modern philosophers have been prone to analyse things and the interactions of things. And if these analyses reflect a misunderstanding of the place of events in the framework of things, they have far more merit if they are viewed as attempts to construct a framework alternative to the framework of interacting things; alternative, yet, in the last analysis, equivalent, a different, but philosophically illuminating mode of representation.<sup>37</sup> In such a framework, changing things become genidentical patterns of ‘events’ and those irreducible metrical *Undinge*, Space and Time, become abstract forms of order.

These considerations suggest that epiphenomenalism, with its disparate categories of *things* (whether the material particles of Hobbes or the nerve cells of modern Neuro-physiology) and ‘phantasms’, is a half-way house; that a unified picture requires a translation of the physiological context in which epiphenomena occur into the framework of ‘events’. With this in mind, let us strain our feeling for conceptual possibilities to the limit by raising the question which more than any other must fascinate the philosopher who takes science seriously and has not succumbed to any of the reductive fallacies exposed in earlier sections of this chapter. How are we to conceive the relationship between the sequence of micro-physical ‘events’ which constitute a brain’s being in the physical state appropriate to the occurrence of a red and triangular sensum, and the sequence of ‘events’ which is the sensum? Or, to put it somewhat differently, what would be the relation between terms for *sensa* and the primitive vocabulary of a micro-physics capable of dealing with inorganic phenomena? To ask this question is to realize that it is a disguised demand for the general lines of a completed scientific theory of sentient organisms. The philosopher’s task can only be that of clearing the way by exposing mistaken

presuppositions and metaphysical assumptions. I shall bring this chapter to a close by examining some relevant dogmas.

In the first place, there is the dogma that *sensa* cannot be in physical space. This conviction seems to be a misinterpretation of the logical truths that *impressions* are not in physical space (which is clear) and that the pseudo-objects ‘of’ which we ‘have’ impressions are not in physical space. But if *sensa* are in physical space—not, of course, the space of physical objects, but of their micro-theoretical counterparts—*where* are they? They are, we have seen, the counterparts of impressions, those states of perceivers which are postulated to explain certain familiar facts of perception and misperception. The obvious, but crude, answer, then, is that they are ‘in the brain’. A better answer is that they are where the relevant brain *events* are, for the phrase ‘in the brain’ has the logical grammar of ‘thing inside thing’, e.g. lump of sugar in a sugar bowl. If it is retorted that *sensa* do not *seem* to be where these brain events are, the answer is twofold: (a) Brain events are not perceived, so that nothing could *seem* to stand in *any* relation to them. (b) If there is a sense in which *sensa* can be said to ‘seem’ to be on the surfaces of physical things, it is a highly derived and metaphorical sense which must not be confused with that in which red objects can seem to be black, or there can seem to be a book behind the mirror. Strictly speaking, *sensa* do not *seem*. They belong to a highly sophisticated account of the world, and simply do not belong to the framework of perceptual consciousness. It is, indeed, true, from the standpoint of this sophisticated framework that when a person sees that a physical object is red and triangular on the facing side, part of what is ‘really’ going on is that a red and triangular *sensum* exists where certain micro-theoretically construed cortical processes are going on; but it would be a mixing of frameworks to say, with some philosophers, that people ‘mistake *sensa* for

physical objects', or 'take sensa to be *out there*'. For these latter ways of putting it suggest that sensa belong to the conceptual framework in terms of which people experience the world.

Another familiar line of thought which requires close scrutiny is the move from the premise that where there is metrical *form* there must be *content*, to the conclusion that the 'qualities of sense' are the content of physical things. The premise is true. The conclusion is true of the physical world of common experience, though awkwardly formulated. But the argument is obviously invalid unless a premise is added to the effect that the 'qualities of sense' are the *only* contents available to embody metrical form. Certainly they are the only contents which play this role in the framework of perceptible *things*. But what of the framework of physical theory? Granted that the metrical properties of the framework of perceptible things are anchored *in* the qualities of touch and sight (a fact which Berkeley saw, but put to bad use), must the metrical forms of micro-physical process be similarly embodied in colours and other qualities of sense? Are nuclear events 'patterns of colour which obey the laws of micro-physics' as physical objects are colour solids which obey the laws of macro-physics? Must the colour predicates of the framework of perceptible things be tacitly present (though with modified grammar) as primitive predicates of the micro-theory of inorganic things? (We have granted that they will be present in the micro-theory of sentient organisms.) To ask these questions is to answer them in the negative. A primitive predicate in a theory is meaningful if it does its theoretical job; and to do this job, as we have seen, it does not have to stand for a perceptible feature of the world.

The phrase 'partial interpretation', often used in explaining the status of micro-theories, plays into the hands of 'structuralism' by suggesting that a theory falls short of complete meaningfulness to the extent that the correspondence rules fall short of enabling a complete translation of the theory into the observation framework with which it is correlated. The picture

is that of a skeleton which has some flesh on its bones. A philosopher who subscribes to the realistic interpretation of theories, but is taken in by this picture, will be tempted to cover the bones which science leaves uncovered with the qualities of sense, supplementing the ‘partial interpretation’ of theoretical terms given by science with a *metaphysical* interpretation. But all such moves rest on a failure to distinguish between correspondence rules, which do *not* stipulate identities of sense, and definitions, which do. Only if correspondence rules were (partial) definitions, would the meaning of theoretical terms be incomplete. It is perhaps not too misleading to say that the meaning of a theoretical term is its use; and that if there is a sense in which there are degrees of meaningfulness for theoretical terms, it is a matter of the extent to which the theory satisfies the criteria of a good theory, rather than of degrees of translatability into the observation language.

If these contentions are sound, then there is no *a priori* reason to suppose that the content for the metrical forms of micro-physical process must be the *sensa* of sophisticated perception theory. And to say that this content must be *like sensa* is *false* if it means that they must be colours which nobody has seen, and *trivial* if it simply means that they are like colours in being dimensions of content.

The third and final point I wish to make is that while it would be a category mistake to suppose that *sensa* can be construed as a dimension of neural process as long as one is working within a framework of thing-like particulars, whether nerve cells, organic compounds, or micro-physical particles, the same considerations do not rule out the possibility that when an ideally completed neuro-physiology interprets the physical concepts it employs in terms of the spatio-temporally punctiform particulars of an ideally completed micro-physics, *sensa* might fall into place as one qualitative dimension among others, one, however, which exists only in neuro-

physiological contexts.<sup>38</sup> Needless to say, the idea that colours might in this sense be a dimension of neural process must not be confused with the idea that nerves are coloured inside like chocolate candies.

To sum up this final section, the scientist, in his attempt to understand perception, must oscillate between the 'Aristotelian' framework in which his problems are initially posed, and in which one logical subject, the person, has sense impressions, and a working 'Hobbesian' framework in which, the unity of the person having been broken down into a plurality of logical subjects, the impressions become logical subjects in their own right, though of an attenuated and epiphenomenal kind. A unified picture of the perceiver can be found only at the beginning and at the end of the scientific quest. It has been my purpose to show that we are not without some glimpse of the end.

---

<sup>1</sup> What, exactly, is meant by ‘more basic than’ in this connection is by no means clear. Certainly it is not claimed that expressions for these entities and the colours which characterize them are learned before expressions for physical objects and their colours. Whether or not the same is true of the corresponding ‘concepts’ or ‘recognition capacities’ is less clear.

<sup>2</sup> To avoid clumsiness, as well as to join up with customary philosophical usage, I shall abbreviate ‘a red and triangular expanse’ into ‘a red triangle’.

<sup>3</sup> Notice that whereas on the *second* approach having a sensation does not seem to imply (as it does on the *first* account) that the subject has any knowledge, this does not seem to be true of the account we are now exploring. For while the fact that there appears to someone to be a red and triangular physical object in a certain place is not itself a *knowing*, it does seem to imply that the person in question has *some* knowledge (knowledge that-p). But this point will be discussed shortly.

<sup>4</sup> Knowing that one has a sensation would, of course, be a conceptual fact. I would agree with Kant that one couldn’t know that one has a sensation unless one had not only the conceptual framework of *persons* and *sensations*, but also that of physical objects in Space and Time. My grounds for saying this will come out later.

<sup>5</sup> The inference, that is, from ‘S has a sensation of a red triangle’ to ‘(Ex) x is red and triangular’.

<sup>6</sup> It will be remembered that the inference from ‘S has a sensation of a red triangle’ to ‘(Ex) x is a red and triangular *sense content*’ would be valid, but trifling.

<sup>7</sup> *Vide* the Cartesian classification of sensations, feelings, images, etc., as *cogitationes*. The influence of this model can readily be traced through seventeenth and eighteenth century thought (and subsequently) in both ‘empiricism’ and ‘rationalism’. Kant’s rejection of this assimilation of the manifold of sense to the conceptual was part and parcel of his Copernican revolution.

<sup>8</sup> The idea that colours have only being-for-sense was grounded in the idea that mechanics doesn’t need to mention the colours of things in explaining why they move as they do. Berkeley saw that no object, *pace* Descartes, can have merely the metrical and structural properties studied by geometry. Either these non-geometrical qualities are such sense qualities as colour, or we must postulate qualities which we do not sense. Classical concept empiricisms precluded the latter alternative; and taking the former, Berkeley was committed to either abandoning the *esse-percipi* principle for colours, or extending it, as he did, to geometrical properties.

<sup>9</sup> J. S. Mill, *An Examination of Sir William Hamilton’s Philosophy*, 3rd Edition, Appendix to Chapters XI and XII. This appendix is such a clear formulation and defense of the phenomenalistic position that it fails by a hairsbreadth to refute it along the lines of the following argument.

<sup>10</sup> It is perhaps relevant to note that the idea that determinism is incompatible with ‘could have done otherwise’ rests on a confusion between

It could not have been the case that x did A at t

and

x was not able to do A at t.

The former has the sense of

That x did A at t is physically impossible relative to the antecedent state of the universe.

In the case of minimal actions (roughly, bodily actions under voluntary control) ‘x was able to do A at t’ means, roughly,

If x had willed at t to do A, then x would have done A

and neither it nor its denial makes reference to the antecedent state of the universe.

<sup>11</sup> See the opening paragraph of this section for an explication of the sense of ‘actual’ in the phrase ‘actual (as contrasted with conditional) sense content’. I take it that it is obvious from what has been said that the existence of conditional entities presupposes the existence of actual entities.

<sup>12</sup> By calling them ‘independent’ I mean simply that they are not supposed to be the ‘translated’ counterparts of common sense or scientific propositions about perception.

<sup>13</sup> For present purposes it is unnecessary to break up the antecedents of these generalizations into a phenomenally characterized circumstance and a (supposed) phenomenal act of the perceiver (e.g. a setting oneself to open one’s eyes) which jointly eventuate in the sense content in question.

<sup>14</sup> See Chapter 4 [“The Language of Theories”, *Science, Perception and Reality*].

<sup>15</sup> This ‘standard’ account is the one associated with the names of N. Campbell, H. Reichenbach, R. Carnap, and many others. A clear presentation is contained in C. G. Hempel’s monograph on ‘Concept Formation in the

---

Empirical Sciences', in the *International Encyclopedia of Unified Science* published by the University of Chicago Press.

<sup>16</sup> For our purposes it will be sufficient to note certain formal features of the relationship. That the standard philosophical commentary on these formal features involves serious mistakes is the burden of Chapter 4.

<sup>17</sup> Including public flashes or light, and other publicly perceptible visual phenomena.

<sup>18</sup> I discuss these matters at length in Chapter 5 ["Empiricism and the Philosophy of Mind", *Science, Perception and Reality*].

<sup>19</sup> Much can be learned about the grammar of sense impression talk by reflecting on the fact that we speak of Jones and Smith as having impressions of *a* red triangle. Could it be the *same* red triangle? The fact that it doesn't make sense to say that their impressions are of the *same* red triangle (except as an odd way of saying that they are having impressions of the same kind) is partly responsible for the doctrine of essences. We shall see that the logical form of impressions is not, to use a crude schematism,

xRy, i.e. (impression) R (red triangle)

but

fx, i.e. impression of the *of-a-red-triangle* kind.

<sup>20</sup> A more careful formulation would be 'unless it has appeared *that* there is a red object in front of one': for a child *could* be taught the use of colour words by showing him objects of the wrong colours under conditions of abnormal illumination.

<sup>21</sup> I argue this point in Chapter 4 ["The Language of Theories", *Science, Perception and Reality*].

<sup>22</sup> A fuller treatment of this topic would tie it in with the discussion of trans-level inference in the preceding section. Furthermore, since the 'theory' of sense-impressions presupposes not only the framework of public physical objects, but also that of perceivers and perceptual episodes, it is clear that an adequate account of the logical status of sense impressions and our knowledge of them presupposes an account of such private episodes as seeing or seeming to see that there is a red and triangular physical object in front of one. There is a discussion of these topics in Chapter 5.

<sup>23</sup> Though, as was also pointed out, if the locution 'a red and triangular sense content exists' were introduced as the equivalent of 'Someone has a sensation of a red triangle' then we could say that the truth of (*a*) entails the existence of something red and triangular. But what he would be saying would be exciting only if misunderstood.

<sup>24</sup> That only one side is relevant to the analogy accounts for the fact that the red triangle of an impression of a red triangle has no back side.

<sup>25</sup> The correct interpretation of the 'of-ness' of thought does resemble, in an important respect the 'of-ness' of sense impressions as analysed above. To over-simplify, a thought *of* p turns out to have the form a thought of the □p kind, where the latter are episodes which, whatever their character as scientific objects, play a role analogous to that played in English by tokens of 'p'. This similarity, however, highlights rather than obscures the essential difference between the intentionality of thought and the pseudo-intentionality of sense impressions.

<sup>26</sup> See the previous footnote but one.

<sup>27</sup> i.e. that to have good reason for espousing a theory is *ipso facto* to have good reason for saying that the entities postulated by the theory really exist.

<sup>28</sup> That the form of predication is complex ('O is now red at place p') does not impugn the undefined or primitive character of 'red'.

<sup>29</sup> The concept of the 'circumstances of perception' is eviscerated by Power Phenomenalism. 'Circumstances' serve merely as the logical subjects of powers and have no other actuality.

<sup>30</sup> Indeed, we saw, the 'uniformities' which do obtain presuppose not only the general principles which relate impressions of sense to impact of the physical environment on the sense organs, but also *particular* matters of fact concerning the physical environment and sensory equipment of the perceiver in question.

<sup>31</sup> Needless to say, only a realistic interpretation of this manifesting is entitled to the ordinary connotation of the terms 'active' and 'passive' as expressing ways of looking at causal transactions. In power phenomenism they are to be interpreted in terms of the difference between the active and passive voices of the verb 'C manifests itself to S in (sense content) x' (i.e. 'C manifests itself to S in x', and 'S is manifested to by C in x'). Since, as was pointed out above, the circumstance, C, is merely the logical subject of the 'active' powers, power phenomenism is in immediate danger of collapsing into solipsism.

<sup>32</sup> The existence of public flashes of red light complicates this point, but changes nothing of principle.

<sup>33</sup> A consistent development of this position requires that all the primitives of the conceptual framework to which the body belongs be such as to apply to the ultimate logical subjects of the frame. A set of logical subjects can have a property (e.g. *juxtaposed*) which the elements do not and cannot have, but the attribution of the property to the set

---

must be explicable, in principle, in terms of predicates applicable to the members of the set. In other words, predicates applicable to the set cannot be primitive.

<sup>34</sup> See the concluding paragraph of Section VI.

<sup>35</sup> Cf. his treatment of the 'I think' in the *Transcendental Deduction of the Categories* and in the *Paralogisms*.

<sup>36</sup> The philosophical problems involved in reconciling such a neo-Hobbesian line with the meaningfulness of human speech, with the Cartesian argument that thinking cannot be a physical process because we can clearly and distinctly understand what we mean by a thought without thinking of thoughts as physical processes, and with the fact that thinking involves the recognition of standards or norms, are far too complex to be more than mentioned in this chapter. I have, however, discussed them at length in Chapters 5 and II, and in a correspondence with Roderick Chisholm which appears as an appendix to Volume II of the *Minnesota Studies in the Philosophy of Science*, edited by Herbert Feigl, Michael Scriven, and Grover Maxwell and published by the University of Minnesota Press, Minneapolis, 1958.

<sup>37</sup> For a detailed comparison of the framework of things and the framework of 'events' see my essay on "Time and the World Order" in Volume III of the *Minnesota Studies in the Philosophy of Science*.

<sup>38</sup> For an elaboration of this, and related, themes, see "The Concept of Emergence", by Paul Meehl and Wilfrid Sellars, in Volume I of *Minnesota Studies in the Philosophy of Science*.